BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 12, 1968
EXAMINER HEARING

IN THE MATTER OF:	)
	)
Application of Jake L. Hamon for the Creation of a new oil pool and for Special Pool Rules, Lea County, New Mexico.	) Case No. 3928

BEFORE: D. S. NUTTER

TRANSCRIPT OF HEARING

MR. NUTTER: Call Case 3928.

MR. HATCH: Application of Jake L. Hamon for the creation of a new oil pool and for special pool rules, Lea County, New Mexico.

MR. HINKLE: Clarence Hinkle, Hinkle, Bondurant and Christy, appearing on behalf of Jake L. Hamon. We have one witness and three exhibits. I would like to have Mr. O'Brien sworn.

(Witness sworn.)

(Applicant's Exhibits 1, 2 and 3 marked for identification.)

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J A M E S R. O ' B R I E N, called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. HINKLE:

Q State your name, your residence and by whom you are employed.

A My name is James R. O'Brien, residence 4417 Story, Midland, Texas, in the employ of Jake L. Hamon, Midland, Texas, as a Geologist.

Q What is your title of employment with Mr. Hamon?

A I am a Geologist.

Q Are you a graduate geologist?

A Yes, I am.

Q Have you previously testified before the Oil Conservation Commission?

A Yes, I have.

Q Your qualifications as a Petroleum Geologist are a matter of record with the Commission?

A Yes, sir, they are.

Q Are you familiar with the application of Jake Hamon in Case 3928?

A Yes, I am.

Q What is Mr. Hamon seeking by this application?

A Mr. Hamon seeks temporary Field Rules caused by the discovery of his State"K-33" Well No. 1 located 1980 feet from the south line and 1980 feet from the west line of Section 30, Township 16 South, Range 36 East, Lea County, New Mexico, with the provision for 80-acre spacing and an 80-acre allowable.

Q These are temporary Rules?

A Temporary Rules.

Q Have you prepared or has it been prepared under your direction certain exhibits to be introduced in this case?

A Yes.

Q Refer to Exhibit No. 1 and explain what this is and what it shows?

A Exhibit No. 1 is simply a field map of the area. We have outlined the various producing fields surrounding Mr. Hamon's discovery with their producing horizons. Also in Sections 30 and 31 of Township 16 South, Range 36 East, we have outlined acreage attendant to the discovery well.

Q The outline you refer to is the outline in yellow?

A Yes, the outline in yellow.

Q Does that outline a working interest unit?

A Yes, it is.

Q Is Mr. Hamon the operator of that unit?

A He is the operator of that unit. Since this particular plat was prepared the southwest quarter of the northwest quarter of Section 31 has been brought into the unit and should be included within the yellow line. It is not on this plat, however.

Q Does this area have an official name as of yet?

A As of yet, no.

Q What do you refer to it as?

A We refer to it as the Shoe Bar East Devonian Area.

Q When was the well started and when was it completed?

A This well was commenced in June of 1968 and it was

completed on September 23, 1968.

Q What was the original objective of the well as far as formations are concerned?

A The original objectives geologically were the Wolfcamp and the Straun.

Q Do you have a Wolfcamp or Straun producer in the area?

A A strong producer was located in the northeast of the northeast of Section 30; it's now abandoned.

Q Did you make a discovery in this well in either the Straun or the Wolfcamp?

A No, we did not.

Q At what formation was the discovery made?

A Our discovery was made from the Devonian.

Q At the approximate depth of what?

A 13,050 feet.

Q Did you make a drillstem test upon entering the formation?

A Yes, in drilling into what should be more specifically called Silero Devonian, we tested rocks below the Woodford formation and encountered porosity lower down into the section. We took a long drillstem test, from 13,038 to 13,080 feet, the tool was open seven and a half hours, and I'll try to minimize this or shorten it as much as possible. On this

particular drillstem test we had gas to the surface in 2 hours, water blanket to the surface in 2 hours and 35 minutes, oil to the surface in 3 hours. We flowed water blanket and oil for 1 hour with no gauge, flowed 33.26 barrels of fluid which was 90% oil and 10% drilling mud in 3 and 1/2 hours. Then the tool was shut in, and we reversed out 58 barrels of oil and 84 and a half barrels of formation water, chloride 17,500 parts per million. We had recovery during the flow test absolutely no formation water at the surface.

Our recovery from the tool was 90 feet of muddy water below the circulating sub, and in the sample chamber we recovered 100 cubic centimeters of water, chlorides 19,000 parts per million, plus 8/10ths of a cubic foot of gas, absolutely no oil. We had shut-in pressures that are normal for this depth in this area for the Devonian.

Q After you completed the well, did you make another potential test of the well?

A Yes, we initially potentialed the Silero Devonian flowing 205.05 barrels of oil plus 88 barrels of water in 24 hours and this is approximately 42% formation water. That was on September 23, 1968 and on October the 9th, 1968, we made application for new allowable.

Q Discovery allowable?

A Well, just a new allowable. We had an increase in daily production in this well. We had to ask for an allowable of 268 barrels of oil and we were making about 26% formation water with this oil. This well is currently producing from the Devonian about 265 barrels of oil plus 17% water, daily.

Q Do you have any other test data with respect to Exhibit No. 1?

A No, sir.

Q Now, refer to Exhibit No. 2 and explain to the Commission what this is and what it shows.

Q Exhibit No. 2 is a Devonian, or more specifically a Silero Devonian structural map, on 1 to 2,000 inch scale, contour interval, 100 feet. This shows the subsurface Silero Devonian contours using the available deep control in this area.

Q Upon what information was this map or plat based?

A This map was based on the subsurface data in the area, correlated to existing sysmic or geophysical data as we know it. The discovery well is indicated in Section 30, the Devonian, the top of the Devonian, at minus 9,051, the red line following the minus 9100 foot contour line is our indicated oil-water contact minus 9101. This is, or has been,

determined by electric log analysis and we believe we have it pinned down to within five or ten feet.

Q Does this plat, Exhibit No. 2, show any faults in the area?

A Yes, we have indicated a northwest-southeast trending fault that would cut the Devonian level. It cuts through Section 31 and through a portion of our acreage in Section 31.

Q This would definitely separate this area from the Shoe Bar Area?

A Very definitely, we are separated. I am not positive what the oil-water contact was in the Shoe Bar Devonian, but I do know that our producing well is below that oil-water contact in that field which is currently abandoned.

Q Are the faults which are shown on Exhibit 2 pretty well defined by the sysmic work that has been performed there?

A Yes, they are.

Q Are you drilling, or do you contemplate drilling any additional wells in the area?

A We are currently drilling the Jake L. Hamon State "A-1320" No. 1 in Section 31, 16 South, 36 East. Its footage location is 510 feet from the north line and 1980 feet

from the east line of that section in the northwest of the northeast quarter.

Q Is that well shown on Exhibit 2?

A It is not shown permanently, it might be penciled on their plats. That well was commenced after these plats were made.

Q What is the well currently drilling at?

A We're just drilling out from below the intermediate casing somewhere below 4950 feet.

Q Of course the objective of that is the Devonian Formation?

A The objective is the Devonian Formation. We propose to drill to 13,100 or 200 feet, depending on the structural position.

Q Is your second well located on what would be a standard 80-acre proration unit if special field rules are adopted providing for 80-acre spacing?

A Yes, it is. I would like to make one other point on this plat and that is that having the oil-water contact indicated as we have, the relative size of this particular Devonian structure indicates that it is a small structure and subsequent wells will have to be drilled updip --

Q Which would be to the south?

A -- from the discovery well, which would be toward the south, yes.

Q Do you have any further comments with respect to Exhibit No. 2?

A No.

Q Now, refer to Exhibit No. 3 and explain what this exhibit is.

A Exhibit No. 3 is a north to south structural cross-section with the discovery well being indicated by the center log of the three logs on the cross-section. This particular cross-section is hung on a subsea datum of minus 8,000 feet.

Q The area that the cross-section follows is shown on the insert plat on Exhibit 3?

A It is shown on the insert plat, the cross-section commences from the left, in the Stanolind A. C. State No. 1 northeast southwest of Section 31, proceeds to the discovery well under question and on the right-hand side the northernmost well is the Union Oil Company Spires No. 1-30 located in the northwest northwest of Section 30.

Q What does this Exhibit 3 show?

A The Exhibit 3 principally shows that faulting can be seen in the subsurface between the Jake Hamon discovery well and the Stanolind State A. C. No. 1 well. There is a

considerable amount of thickening in the Atoka Formation that cannot be correlated, or could not be correlated, normally by any other means than using a fault to explain it. This particular fault is analagous to one on the west side of Shoe Bar. The cross-section also indicates the perforated interval on the discovery well at 13,050 and 13,058 feet and our current flowing potential on the discovery well, as well as the oil-water contact indicated at minus 9101 in the discovery well.

Q You have indicated that these wells are a little over 13,000 feet deep. Do you have any idea of the approximate cost, or whether they are pretty expensive to drill and complete in the area?

A Yes, completed well costs are fairly high. They will exceed a quarter of a million dollars per well.

Q Was the Shoe Bar Field which you have testified to in the area, the other Shoe Bar Field, an economical field, did it ever pay out?

A To the best of my knowledge, not having the well costs and completion costs in the Shoe Bar Field, I can't specifically state, but that field with six or seven producing wells, produces less than 1 million barrels of oil, from the available data,from the Devonian Formation before it was

plugged out.

Q So the economics are not too good as far as that area is concerned?

A That's true.

Q Do you anticipate here that one well will effectively and efficiently drain 80 acres or more?

A Yes.

Q That has been pretty well demonstrated in comparagle Devonian Fields in the area?

A Yes.

Q Do you anticipate that within a year you will have additional information which you will be able to show to the Commission, that one well will effectively and efficiently drain such 80-acres?

A Yes, we will have.

Q At that time you will have more producing history with respect to this area?

A Yes, we will have; we hope to have.

Q In your opinion would the adoption of special field rules providing for 80-acre spacing, 80-acre proration units, prevent the drilling of unnecessary wells and be in the interest of conservation and prevention of waste?

A Yes, it would, in my opinion.

Q Also in the interest of protection of correlative rights?

A Yes.

Q What type of special field rules, if any, or any recommendations you have with respect to the special field rules, to be adopted?

A We would like to ask for an adoption of 80-acre spacing with the proration unit consisting of either the north half, the south half, the east half or the west half of any governmental quarter section with the permission to drill in either 40-acre component, and 150 foot tolerance from the center of that 40-acre component.

Q Both the wells, that is the one that you have completed and the one that you are now drilling, would conform?

A With that spacing pattern, yes, sir.

Q Have you been in touch with all of the owners of acreage in the immediate area that might be affected by the adoption of special field rules?

A Yes, we have.

Q Have you had any objection to the adoption of your proposed rules?

A We have had no objection, only favorable comments.

Q Do you know whether or not any of the companies

which are involved have made any comments or written to the Commission with regard to this case?

A To my knowledge, the Ralph Lowe Estate, the Humble Oil and Refining Company have addressed the Commission by telegram or letter as proponents for our case here, and we have other interested companies present at the hearing today, I believe, who would like to make a statement.

MR. HINKLE: We would like to offer in evidence Exhibits 1, 2 and 3.

MR. NUTTER: Hamon's Exhibits 1 through 3 will be admitted in evidence.

(Whereupon, Hamon's Exhibits 1, 2 and 3 offered and admitted in evidence.)

MR. HINKLE: That's all the direct examination.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. O'Brien, I presume this is a water drive in this reservoir, or do you know yet?

A I don't know yet.

Q You do have a water-oil contact fairly well established?

A Yes.

Q Most of the Devonian Reservoirs in Southeast New

Mexico, or Northern Lea County, are water drive reservoirs, arent they?

A Yes, sir, they are.

Q So the presumption might be that this would also be a water driven?

A The presumption is yes; this well was initially completed on a half inch choke with 40 pounds tubing pressure. The obvious decrease in water percentages that we're making on production and the increases in oil percentage is anomalous to a strong water drive, from my experience.

Q Now, you show on your cross-section on the IP that the gas-oil ratio was 680 to 1. How is the gas-oil ratio holding?

A We have only taken two tests to my knowledge on the gas-oil ratio. It's holding about the same.

Q Do you know whether this reservoir is similar to any reservoir that the Commission has approved 80-acre spacing for, and if so, which one?

A Sir, I would like to make a statement. I looked for and could not find, prior to coming up here, field rules for the Shoe Bar. I was remiss in not getting those. I believe the Bough-Devonian Field in North Lea County which produces from the Silerian Reservoir which I believe this

reservoir really is, is very similar to this in nature and it has 80-acre spacing.

Q And that's the only one that you know of that is similar? Now is this Bough-Devonian that you are referring to --

A Pardon me, sir, the Vacuum-Devonian is one also.

Q Are these Devonian pools that you are referring to Devonian pools in which there's just a small amount of pay in the top of the Devonian that is productive like this one is, or would they be the massive Devonian type of reservoir such as Denton or some of the others?

A No, they wouldn't be the massive. We honestly don't have enough data on this particular reservoir to correlate it specifically to another pre-Woodford Field, if you can follow me there.

Q This is different than the so-called massive-type Devonian pools that we have down there?

A I believe it is, yes, sir.

Q If you had gone much farther down into the formation with your perforations here,you would have been down into the water.

A We would have been below the water. The bottom of our perforations are five feet above our indicated water-oil

contact.

Q What are the surface elevations so we can correlate these perforations with the subsea level. You can just give me your perforations, if you have them, on subsea basis; you have 13,050.

A Yes, sir, I have those, our perforations are 13,050, 13,058 that correlates to a subsea depth of minus 9,088, minus 9,096.

Q 88 to 96?

A Yes, the apparent effective perforations are the bottom two feet.

Q And 9101 is your water-oil contact?

A 9101 is the water-oil contact, yes, sir.

MR. NUTTER: Are there any other questions of the witness? He may be excused.

(Witness excused)

MR. NUTTER: Do you have anything further, Mr. Hinkle?

MR. HINKLE: No, but I think there are several people here who would like to make a statement.

MR. KREUZ: Yes, I'd like to make a statement on behalf of Mobil Oil Corporation. My name is C. R. Kreuz, spelled, K-r-e-u-z; Mobil as an operator in the subject area, supports and recommends approval of Mr. Hamon's application,

including the provision for 80-acre proration units.

MR. COON: John A. Coon, on behalf of Getty Oil Company,Midland, Texas. I have appeared before the Commission and my qualifications are on record. Getty Oil Company has approximately 1,120 acres interest in this amount of acreage in the immediate vicinity of Mr. Hamon's well. We agree with the testimony that has been presented, and we support Mr. Hamon's request for these special field rules. From our knowledge, we are of the opinion that this reservoir can be adequately drained by this 80-acre spacing and we approve of the field rules.

MR. NUTTER: Thank you.

MR. HINKLE: I think there were some communications to the Commission.

MR. HATCH: The Commission has received communication from Ralph Lowe Estate in support of the application and communication from Humble Oil and Refining and Union Oil of California offering no objection to the application.

MR. NUTTER: Thank you. Anyone else have anything in 3928? We will take the case under advisement.

I N D E X

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my hand this 21st day of November, 1968.

Ada Dearnley

ADA DEARNLEY

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3928, heard by me on 11/12, 1968.

Examiner
New Mexico Oil Conservation Commission